

10/773,655

< [002] This application claims priority from German Application serial
< No. 103 14 064.6 filed March 28, 2003.

< [003] FIELD OF THE INVENTION

< [004] The invention concerns a method for determining the rotation speed and
< rotation direction of a component, ~~in the manner defined in greater detail in the~~
< ~~preamble of Claim 1.~~

< [005] BACKGROUND OF THE INVENTION

< [014] SUMMARY OF THE INVENTION

< [018] BRIEF DESCRIPTION OF THE DRAWINGS

< [019] ~~Other advantages and advantageous further developments of the~~
< ~~invention emerge from the claims and from the example embodiments described~~
< ~~in principle below.~~ The invention will now be described, by way of example, with
< reference to the drawing, accompanying drawings in which shows:

< [021] Fig. 2 ~~are~~ is a graphic illustration of two at least approximately sinusoidal
sensor signals of the sensor device according to Fig. 1, with a corresponding
rectangular variation of a sensor output signal produced by pulse signals
generated by the sensor device and used to calculate and determine the rotation
direction of a rotation speed of the signal wheel;

< [029] DETAILED DESCRIPTION OF THE INVENTION

< [030] Referring to Fig. 1, a sensor device 1 for determining the rotation speed
< and direction of a rotary component (e.g., signal wheel) 2 is shown, which is
arranged a certain distance LS from the component 2. The distance between the
component 2 and the sensor device 1 is denoted here as the air gap LS, and
during operation this varies dynamically due to manufacturing inaccuracies, for
example, out-of-roundness of the component 2.

10/773,655

[Page 16, Reference numerals]

1	Sensor device
< 2	Component <u>(e.g., signal wheel)</u>
3	Toothed profile
DB	Flux density change
LS	Air gap
low	Pulse height
high	Pulse height
high_v	Rotation-direction-dependent pulse height
high_r	Rotation-direction-dependent pulse height
s_o	Upper switching limit
s_u	Lower switching limit
t	Time
t_pb	Pulse width
t_pd	Period duration
t_pb_v	Rotation speed- or direction-dependent pulse width
t_pb_r	Rotation speed- or direction-dependent pulse width
t_pb_limit	Limit value of the pulse width
T_w	Time point
T_s	Time point
I, II	Sensor signal